



Android Application Development

Course Outline:

Lesson 1: Hello Android Framework

- Introduction
- Creating an Android Project
- Within Eclipse
- From Command line
- Running Your Application
- Running you project on the emulator
- Components of an Android application
- Application Life-cycle
- Modifying created project
- Change activity's name

Lesson 2: Android SDK Tools and Activity Class

- Android Software Layers
- Linux kernel
- C/C++ Libraries
- Android Runtime
- Application Framework
- Application layer
- Android Libraries
- The Android Manifest File
- Structure of the Manifest File
- Android SDK Tools
- Activity life-cycle through Java
- Create an Activity
- Methods to remember

Lesson 3: ListActivity and ListView

- Introduction
- Views
- Using Views
- Adding a View to your application
- List Views and List Activity
- Using a ListActivity
- Adding ListView
- Add Event to List Items

- Summary
- Methods to remember

Lesson 4: Intents and Intent filters

- Introduction
- Intents
- Explicit Intents
- Implicit Intents
- Native Android Actions
- Data Transfer
- Intent to Call Activities
- Direct calls
- Sub-activities: Calling Activities for Results
- Register an IntentFilter
- Methods to remember

Lesson 5: Custom Views

- Introduction
- Different Uses of Customized Views
- Modify Existing Views
- Step by Step
- What is in onDraw()
- The full picture

Lesson 6: Dialogs and Toasts

- Dialogs
- Dialog sub-classes
- Creating dialogs with user-defined layout
- Activities with Dialog Theme
- Toasts
- Methods to remember

Lesson 7: More UI - Options Menu, Context Menu, and WebView

- Introduction
- Menus
- Building a menu from Java code
- Building a menu from a resource file
- Handle Select Events
- Sub-menus
- Context Menus
- Handling Context Menu Selection
- Additional Menu Item options
- Checkboxes and Radio Buttons
- Shortcut Keys
- Condensed Titles

- Menu Item Click Listener
- Intents
- WebView
- Methods to remember
- Practical Exercise

Lesson 8: Android Storage: Network, File I/O, and SharedPreferences

- Android Storage Options
- Shared Preferences
- Internal Storage
- SQLite Databases
- Network Connection
- Connecting to the internet
- File I/O
- Including files as resources
- Shared Preferences
- Retrieving Shared Preferences
- Save activity state

Lesson 9: Android Storage: SQLite and Content Providers

- Introduction
- SQLite in your application
- SQLite library
- SQLiteOpenHelper
- SQLiteDatabase
- Cursors
- Databases in Android
- Native Android Content Providers
- Methods to remember

Lesson 10: Android Notifications

- Introduction
- Creating a notification
- Notification actions
- Example: NotificationManager
- Summary